# 3 AGILE AND THE BUSINESS

## 3.1 THE ECONOMIC CASE FOR AGILE

Agile is focused on delivering value to the business within the shortest effective time frame, and so enable businesses to achieve a positive return on investment as soon as possible. This creates a very compelling economic case; the more Agile a business is, the easier it is for the business to change direction and understand the implications of doing so on an as-and-when-needed basis. This ability is essential in today's fast evolving markets with their ever-decreasing windows of opportunity, and in businesses where IT is a key enabler and differentiator.

There are many ways to measure delivery economics. One of the most effective that is used regularly in Agile deliveries is product flow economic modelling. This approach recommends that many economic variables should be considered when deciding the order of delivery, however, if only one thing is going to be measured, it should be cost of delay (the cost to the business of not implementing a feature at a point in time – for example, losing competitive advantage). We will look at this in more detail in Section 10.1.

In the following we will look at some of the surveys and studies that have been published to help make an economic case for Agile.

### 3.1.1 The Chaos Manifesto 2011

The Chaos Manifesto 2011 from the Standish Group (Standish, 2002) identified the following figures in relation to project success, comparing Waterfall against Agile product deliveries (see Table 3.1).

**Table 3.1 Standish Chaos Manifesto 2011**

| | Successful | Challenged | Failed |
|---|---|---|---|
| Waterfall | 14% | 57% | 29% |
| Agile | 42% | 49% | 9% |

The report says:

> The Agile process is the universal remedy for software development project failure. Software applications developed through the Agile process have three times the success rate of the traditional Waterfall method and a much lower percentage of time and cost overruns.
>
> (Standish, 2002)

'Success' is defined as on time, on budget and with all planned features. There is no indication of how many deliveries were assessed, however, the assessment period was between 2001 and 2010.

### 3.1.2 The Cutter Consortium report 2008

The Cutter Consortium report entitled 'How Agile projects measure up, and what this means to you' by Mah and Lunt (2008) provides an exhaustive insight into the impact that the adoption of Agile had on the IT industry, especially when considering scaled Agile. The report analysed a database of 7,500 completed Waterfall-driven IT projects and then compared key measures (e.g. cost and time) against 20 Agile releases from five different companies. The results showed that two of the companies achieved best-in-class levels of performance from using Agile.

Company 1 used a collocated eXtreme Programming approach (XP – see Section 14.1). Table 3.2 shows that it ran teams that were broadly the same size as industry average for this size of project, yet it achieved some very significant benefits.

Company 2 used a distributed Scrum approach (see Section 14.2). It wanted to ensure fast time to market for their product and therefore their team size was larger than the industry average. While there are significant risks with increasing team size to enable speed time to market (see Section 2.4.1), the numbers show that their Agile approach enabled Company 2 to implement a team significantly larger than average but also achieve significant improvement in time to market whilst delivering fewer defects and lower costs than average (see Table 3.3).

**Table 3.2 Cutter Consortium – example 1**

| | Company 1 | | |
|---|---|---|---|
| | **Industry average** | **Agile delivery** | **Improvement (%)** |
| Cost ($m) | 3.5 | 2.2 | 37 |
| Schedule (months) | 12.6 | 7.8 | 38 |
| Defects (at QA) | 242 | 121 | 50 |
| Staff | 35 | 35 | n/a |

Using average project size on 500K lines of code

Source: Mah and Lunt (2008)

**Table 3.3 Cutter Consortium – example 2**

| | Company 2 | | |
|---|---|---|---|
| | Industry average | Agile delivery | Improvement (%) |
| Cost ($m) | 5.5 | 5.2 | 5 |
| Schedule (months) | 15 | 6.3 | 58 |
| Defects (at QA) | 713 | 635 | 11 |
| Staff | 40 | 92 | n/a |
| Using average project size on 700K lines of code | | | |

Source: Mah and Lunt (2008)

### 3.1.3 State of Agile survey

Another often quoted source of Agile economic statistics is the annual 'State of Agile' survey produced by VersionOne (VersionOne, n.d.; Table 3.4). These statistics are based on input from a global community of Agile practitioners who are asked how they rate the importance of Agile to achieve certain objectives. Although this doesn't directly support the economic case for Agile, it does give an indication of how relatively important survey respondents think Agile is to achieving key objectives like time to market.

**Table 3.4 State of Agile survey 2013**

| | Not important | Somewhat important | Very important | Most important |
|---|---|---|---|---|
| Time to market | 3 | 21 | 43 | 32 |
| Managing priorities | 3 | 17 | 54 | 27 |
| Better alignment IT/business | 9 | 27 | 42 | 23 |
| Increase productivity | 3 | 24 | 55 | 19 |
| Increase software quality | 6 | 28 | 48 | 18 |
| Reduce risk | 6 | 35 | 47 | 12 |
| Reduce cost | 15 | 40 | 35 | 10 |

## 3.2 BUSINESS CULTURE AND AGILE

Business culture is what defines the business. It can be seen in things such as organisation charts, role descriptions, processes and tools, but is really defined by how people interact with each other, and the customs, beliefs, stereotypes, values and taboos in an organisation – all of which are typically much harder to recognise and visualise.

Understanding the dominant culture of a business is a fundamental exercise before embarking on any Agile transformation, simply because the existing dominant culture may present a serious obstacle to implementing an Agile approach. ‘Culture models’ can help to visualise and determine a business’s culture and to understand how it may hinder or help the implementation of an Agile approach.

One such model is the Schneider culture change model (Schneider, 1999; Figure 3.1). It defines ‘culture’ as the answer to the question: ‘How do we do things here to succeed?’ Based on the answer, it describes four distinct cultures:

## Figure 3.1 Schneider culture change model


- **Collaboration** culture is about working together.
- **Control** culture is about getting and keeping control.
- **Competence** culture is about being the best.
- **Cultivation** culture is about learning and growing with a sense of purpose.

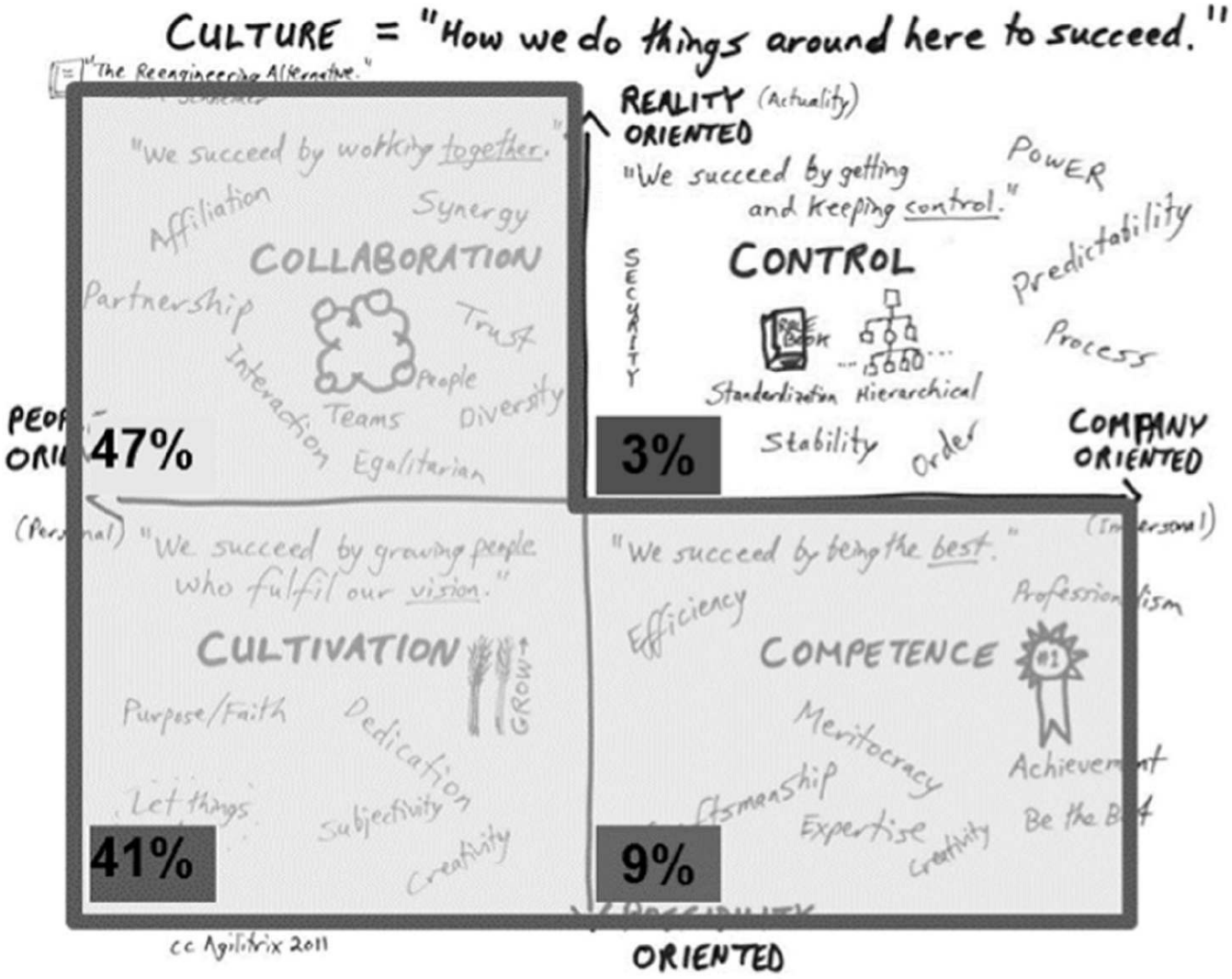
The axes of the model define whether the business is more people or company oriented and whether the business is more focused on today’s realities or on tomorrow’s possibilities.

Michael Spayd undertook a culture survey of Agilistas (Spayd, 2011). His

landmark results show that Agile practitioners have a particular culture profile and identified the key elements as collaboration and cultivation. The results suggest that Agile is all about the people. Interestingly, the survey included Scrum, XP, as well as Kanban software practitioners (see Figure 3.2).

Michael Sahota then mapped the Agile manifesto values and principles to the Schneider model (Sahota, 2012) which showed there is high density of values and practices that are aligned with collaboration and cultivation. There were no elements related to control culture and only one related to competence culture. So both Sahota's and Spayd's analysis were strikingly similar.

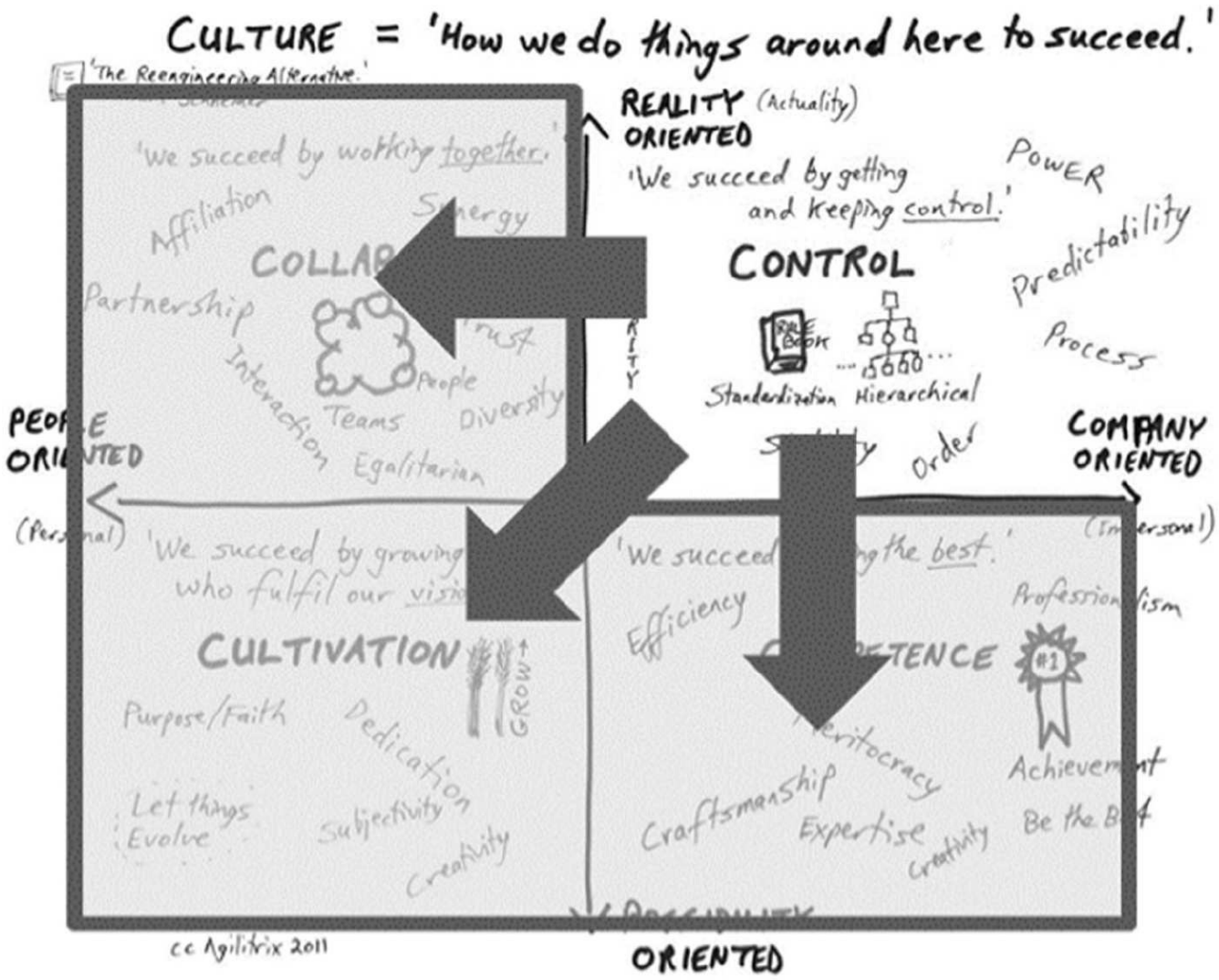
**Figure 3.2 Schneider culture change model – Agile friendly**




### *3.2.1 The 'journey to agility'*

A significant part of any Agile transformation is enabling an organisation to move away from a command and control culture to an environment that is more focused on collaboration and cultivation (see Figure 3.3). This creates an environment in which teams can focus on delivering products of the appropriate level of quality whilst self-organising.

**Figure 3.3 Schneider culture change model – journey to agility**




Creating an Agile business culture requires the team, as well as the people around the team, to buy into Agile values and principles. This includes key stakeholders, customers and the management team as it can prove very difficult, if not impossible, for an Agile approach to work effectively if the people around the team aren't (yet) aligned.

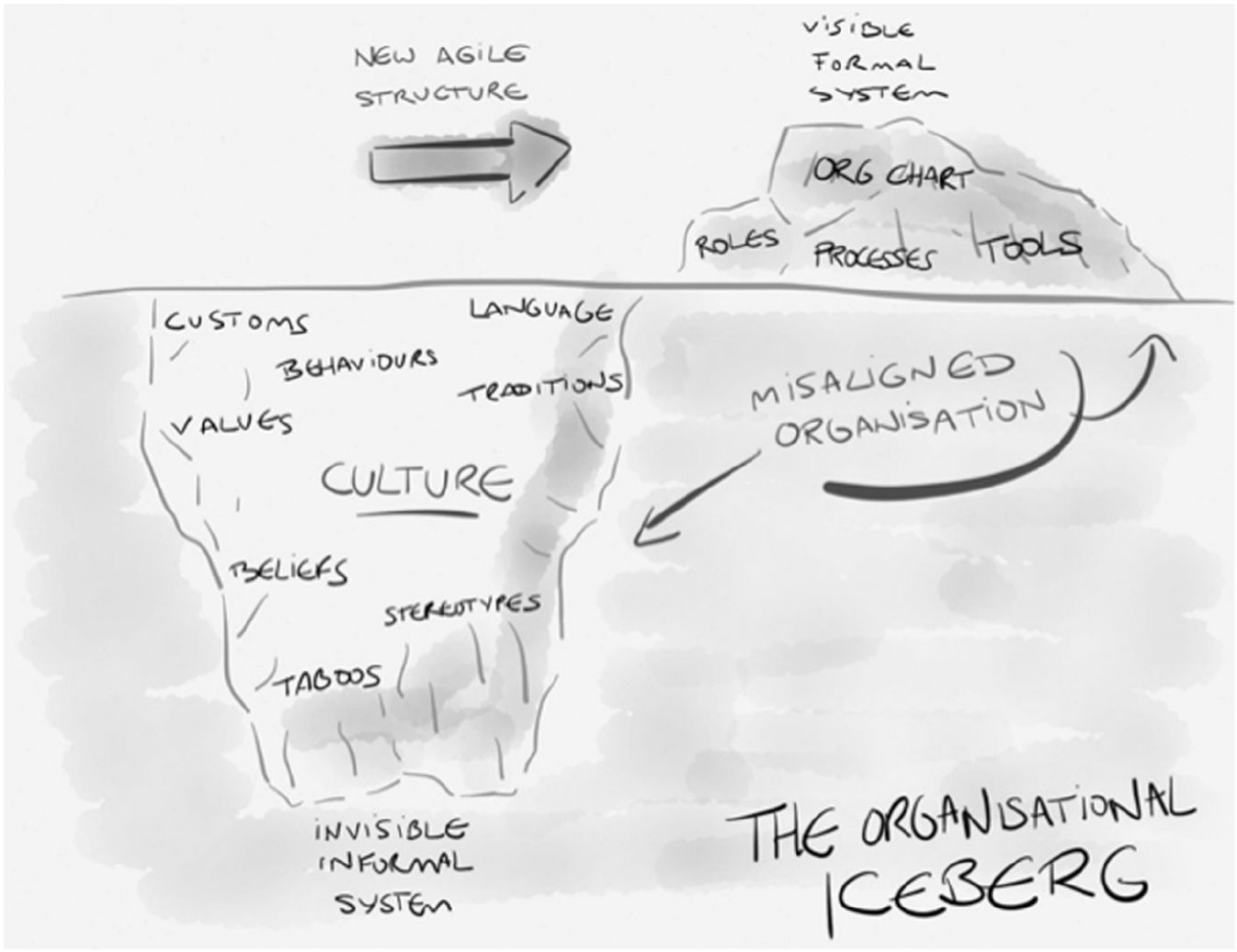
A key role to help this transformation is that of the Agile lead (see Section 6.3). They are responsible for helping team members make the cultural shift from command and control and to cultivate collaboration. In addition, they also work with stakeholders, customers and management teams to help them understand the Agile principles and values that are necessary to create a culture in which the team can inspect and adapt with support and confidence.

Cultural change is fundamentally important to any transformation, and arguably even more so with Agile where the mindset change is so significant (see Section 2.1). Trying to implement any transformation without taking into consideration the cultural aspect of a business is a fatal mistake that inevitably leads to failure.

Figure 3.4 illustrates a situation where the visible formal system of an organisation has been changed without the underlying culture being changed and aligned. Training the team members, changing their job titles and implementing new processes and tools are not sufficient to create a sustainable transformation to Agile. A significant amount of time and money can typically be spent/wasted

changing the visible formal system, which will then inevitably sink back into the ocean because it is not supported by the culture of the business.

## Figure 3.4 The organisational iceberg




(Source: Plant, 1989)